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NOV 17 2006

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

MAX FRIEDHEIM

Filed: 4/30/2001

Serial No.: 10/066,281

FOR: IMPROVED SUPERHEATED  
VAPOR GENERATOR SYSTEM AND  
METHOD

DECLARATION OF MAX FRIEDHEIM  
IN SUPPORT OF PATENTABILITY OF  
APPLICATION

MAX FRIEDHEIM hereby declares under penalty of perjury as follows.

- (1) My name is MAX FRIEDHEIM. My address is 2036 Emerald Street, San Diego, California 91950. I am the inventor and applicant in the subject patent application. I make this Declaration upon personal knowledge and have first-hand familiarity with the contents of this Declaration.

If called as a witness I could and would competently and truthfully testify in accordance with this Declaration.

- (2) For many years I have worked and invented in the field of superheated vapor generators and in particular superheated vapor generators comprising vaporization chambers with highly heated walls of specific characteristics such that liquid entering the vaporization chamber is substantially simultaneously vaporized, into a relatively

FROM : PDQ PRECISION INC San Die ( PHONE NO. : 619 474 1300  
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"dry" vapor (i.e., substantially all of the liquid being vaporized, as opposed to an appreciable amount of vaporized liquid included in superheated vapor). The superheated vapor is outputted from the generator and is employed for various purposes such as cleaning, disinfection and the like. Among my U.S. patents in the superheated vaporization field are U.S. Patent No. 4,414,037, and U.S. Patent No. 5,471,556, incorporated by reference in the subject patent application.

- (3) Many years of testing and use of superheated vapor generators built in accordance with my patents have established that liquid entering into a vaporization chamber of my design substantially simultaneously is vaporized and issued as superheated vapor from the output of the vaporization chamber.
- (4) The within patent application utilizes this capability of my vaporization chamber in connection with control of the output by controlling the input. The control of output is accomplished by control of pressure, volume and velocity of the input liquid through apparatus for controlling pressure, volume and velocity of input liquid flow.

I hereby declare under penalty of perjury under the law of the State of California that the foregoing is true and correct.

Executed under penalty of perjury this 9 day of March 2006 at San Diego, California.

  
 MAX FRIEDHEIM

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I certify that this correspondence is being  
deposited with the U.S. Postal Service as first class  
mail in an envelope addressed to: Hon. Commissioner of  
Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

*[Signature]*

**SECOND DECLARATION OF MAX  
FRIEDHEIM IN SUPPORT OF  
PATENTABILITY OF APPLICATION**

MAX FRIEDHEIM hereby declares under penalty of perjury as follows.

- (1) My name is MAX FRIEDHEIM. My address is 2036 Emerald Street, San Diego, California 91950. I am the inventor and applicant in the subject patent application. I make this Declaration upon personal knowledge and have first-hand familiarity with the contents of this Declaration.

If called as a witness I could and would competently and truthfully testify in accordance with this Declaration.

- (2) For many years I have worked and invented in the field of superheated vapor generators and in particular superheated vapor generators comprising vaporization chambers with highly heated walls of specific characteristics such that liquid entering the vaporization chamber is substantially simultaneously vaporized, into a relatively

"dry" vapor (i.e., substantially all of the liquid being vaporized, as opposed to an appreciable amount of vaporized liquid included in superheated vapor). The superheated vapor is outputted from the generator and is employed for various purposes such as cleaning, disinfection and the like. Among my U.S. patents in the superheated vaporization field are U.S. Patent No. 4,414,037, and U.S. Patent No. 5,471,556, incorporated by reference in the subject patent application.


- (3) Many years of testing and use of superheated vapor generators built in accordance with my patents have established that liquid entering into a vaporization chamber of my design substantially simultaneously is vaporized and issued as superheated vapor from the output of the vaporization chamber.
- (4) The within patent application utilizes this capability of my vaporization chamber in connection with control of the output by controlling the input. The control of output is accomplished by control of pressure, volume and velocity of the input liquid through apparatus for controlling pressure, volume and velocity of input liquid flow.
- (5) The improved superheated vapor generator system and method described and claimed in the within patent application is a substantial advance over the system in the '037 patent and the '556 patent. In the prior patents input of liquid to the vaporization chamber is wholly pre-set as to volume, flow rate and pressure in that: said input of liquid is provided by a motorized pump designed to operate with predetermined parameters - - i.e., a predetermined flow rate (4.9 gallons per hour in the embodiment described in detail in the '037 patent.) See '037 patent col. 5, lines 25-41 and col. 6, lines 13-19. The motor is set to operate at 366 rpm and with the particular dimensions described in the '037 patent (col. 5, lines 30-37) to pump at the rate 4.9 gallons per hour. In order to change the preset

operating parameters of the '037 system i.e., to change the input of liquid provided by the pump, it is necessary either to use a different pump with different operating specifications or to open the pump housing and attempt to tinker with the pump to change its operating performance. Both of these procedures are time consuming and inefficient and, most importantly, require the pump to be taken off line, thus halting operation of the entire system.

- (6) By contrast, in the present invention, adjustment of liquid input is accomplished on line by simply adjusting the valve 41 through valve control 43 thereby adjusting input of liquid to the pump and into the vaporization chamber. This is an important advance because it enables the system to be employed flexibly for varied purposes corresponding to particular required outputs by merely suitably adjusting the liquid input by means of valve 41 and valve control 43. Such input can be varied not only in volume but in pressure and velocity depending upon the pressure and velocity of liquid as regulated by the valve and valve control. This capability of input control provides output control of pressure, volume and velocity. This in turn permits the system to be efficiently employed for many and varied applications. For example, conventional cleaning of firearms, jewelry and the like and sterilization of surfaces may be accomplished employing the parameters described in the '037 patent. By adjusting downward (i.e., providing smaller fluid input) the same system can be employed to clean and/or disinfect small or fragile parts and components such as medical canulas, needles, and the like, without taking the pump and/or system offline.
- (7) In this manner, the present system provides the capability of continuous use and adjustment for different tasks or within the same task as, for example, to increase output pressure when less accessible portions of the object of the output must be reached.

I hereby declare under penalty of perjury under the law of the State of California that the foregoing is true and correct.

Executed under penalty of perjury this 24 day of April 2006 at San Diego, California.

  
MAX FRIEDHEIM

1776-419(011)2-na Friedheim Declaration/Patentability/App. 4